ATTY DOCKET NO. SERIAL NO. MIT-114J 09/898,815 INFORMATION DISCLOSURE CITATION
(Use several shipets if necessary) Applicant(s) Shi-Chang Wooh FILING **GROUP** July 5, 2001 2878 Date **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE DOCUMENT NUMBER CLASS SUBCLASS DATE NAME IF APPROPRIATE INITIA 6,253,618 07/03/2001 Wooh 07/25/2000 Kimura et al. 6,092,420 06/20/2000 Haardt 6,078,788 6,061,553 05/09/2000 Matsuoka et al. 5,930,293 07/27/1999 Light et al. 5,926,503 07/20/1999 Kelton et al. 10/27/1998 Wright et al. 5,827,188 10/20/1998 Schindel et al. 5,824,908 5,818,592 10/06/1998 Womack et al. 5,814,732 09/29/1998 Nogami 5,814,730 09/29/1998 Brodeur et al. **FOREIGN PATENT DOCUMENTS** TRANSLATION COUNTRY SUBCLASS DOCUMENT NUMBER DATE CLASS YES S JP-4-64350 02/28/1992 Japan EP 0 935 258 A1 08/11/1999 Europe 5 06/06/1979 United Kingdom GB 2008756 A WO 96/22527 07/25/1996 **WIPO** 21 05/02/1996 **WIPO** WO 96/12951 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Thompson et al., "Quantitative Nondestructive Evaluation", Center for NDE and Department of Aerospace Engineering and Engineering Mechanics, Iowa State University, American Institute of Physics, Melville, NY, AIP Conference Proceedings, Vol. 19A, pp. 831-838, July (1999). C.B. Scruby and L.E.Drain, "Laser Ultrasonics: Techniques and Applications", Adam Hilger, Briston UK (1990), Ch. 6, pp. 324-405. 5.X DATE CONSIDERED 7/23/04 **EXAMINER** *EXAMINER: Initial If reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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SV		5,80)4,727	09/08/1998	Lu et al	•		· · · · · · · · · · · · · · · · · · ·					
5Y		5,76	57,410	06/16/1998	Lareau	et al.							
SV		5,76	53,785	06/09/1998	Chiang								
5.Y		5,76	50,307	06/02/1998	Latimer	et al.							
SY		5,72	24,138	03/03/1998	Reich et	al.							
SY		5,672,830		09/30/1997	Rogers	et al.							
SΥ		5,671,154		09/23/1997	Iizuka e	t al.							
.2.		5,665,907		09/09/1997	Sheen e	t al.							
54		5,650,852		07/22/1997	Chastai	n et al.							
5/		5,64	16,350	07/08/1997	Robinso	on et al.							
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21			Safaeinili et al., "Air-Co Ferroelectrics, and Freq	upled Ultrasonic uency Control, V	Estimatio ol 43, pp.	n of Viscoelastic St 1171-1179 (Nov. 19	iffnesses 196).	in Plates",	IEEE Transact	ions on Ult	rasonics,		
SΥ			G.A. Alers, "Railroad Rail Flaw Detection System Based on Electromagnetic Acoustic Transducers", U.S. Department of Transportation Report DOT/FRA/ORD-88/09 (September, 1988).										
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5 Y		5,627,508		05/06/1997	Cooper	et al.		-					
57		5,606,256		02/25/1997	Takei								
5 Y		5,578,758	Ì	11/26/1996	Havira	et al.							
5 Y		5,574,989		11/12/1996	Watson	et al.							
54		5,574,224		11/12/1996	Jaeggi								
SY		5,532,697		07/02/1996	Hidaka	et al.							
5 Y		5,522,265		06/04/1996	Jaeggi								
5Y		5,488,737		01/30/1996	Harbin	et al. 							
57		5,439,157		08/08/1995	Geier et	al.			ļ				
51		5,438,872		08/08/1995	Kobaya	shi et al.							
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54		5,419,196	05/30/1995	Havira	et al.					
<i>کار</i>		5,386,727	02/07/1995	Searle						
SY		5,341,683	08/30/1994	Searle						
ŚΥ		5,303,240	04/12/1994	Borras	et al.					
57		5,265,831	11/30/1993	Muller						
57		5,212,988	05/25/1993	White e	et al.					
SY		5,172,343	12/15/1992	O'Donnell						
SY		5,154,081	10/13/1992	Thompson et al.						
SY		5,152,010	09/29/1992	Talwar				-		
SY		5,129,262	07/14/1992	White et al.						
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SY		5,035,144	07/30/1991	Aussel						
źλ		4,932,618	06/12/1990	Davenp	ort et al.					
21		4,866,614	09/12/1989	Tam	(**.)*·.				<i>b</i>	
5 Y		4,834,111	05/30/1989	Khanna	et al.					
SY		4,821,575	04/18/1989	Fujikak	e et al.					
SY		4,785,667	11/22/1988	Miyajir	na et al.					
54		4,700,574	10/20/1987	Turbe						
SY		4,688,429	08/25/1987	Holroy	d					
ΣY		4,659,224	04/21/1987	Monchalin						
5γ		4,633,715	01/06/1987	Monchalin						
57		4,619,529	10/28/1986	Iuchi et	al.					
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Applicant(s) Shi-Chang Wooh

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July 5, 2001 2878 Date **U.S. PATENT DOCUMENTS** EXAMINER FILING DATE DOCUMENT NUMBER SUBCLASS DATE NAME CLASS INITIAL IF APPROPRIATE 4,570,487 02/18/1986 Gruber 5 4,497,210 02/05/1985 Uchida et al. 4,487,071 12/11/1984 Pagano et al. 4,481,822 11/13/1984 Kubota et al. 4,437,031 03/13/1984 Gunshor et al. 4,372,163 02/08/1983 Tittmann et al. 4,354,388 10/19/1982 Diepers et al. 4,248,092 02/03/1981 Vasile et al. 4,174,636 11/20/1979 **Pagano** 4,143,553 03/13/1979 Martens et al. 4,127,035 11/28/1978 Vasile **FOREIGN PATENT DOCUMENTS** TRANSLATION DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) DATE CONSIDERED 7/23/04 **EXAMINER**

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54		3,937,068	02/10/1976	Joy						
SY		3,812,708	05/28/1974	Cowan	et al.					
5V		3,564,488	02/16/1971	Higashi	et al.					
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